

A hear a package of bills have been introduced by Sen. Wayne Kuipers (R-30), Sen. Gerald Van Woerkom, (R-34), and Sen. Roger Kahn (R-32) that could render the MMMA ineffective. The bills are scheduled for a hearing this Tuesday, January 19, at 1:00 p.m. before the Senate Judiciary Committee, which Sen. Kuipers chairs.

What: Senate Judiciary Committee meeting to consider Senate bills 616-18.

When: Tuesday, January 19, 2010 at 1:00 p.m.

Where: Room 210, Farnum Building, 125 W. Allegan Street, Lansing, MI 48933

This legislation unravels the MMMA! At first glance, the idea seems innocent. The proposals, Senate Bills 616-18, would reclassify medical marijuana (not marijuana generally) as a "Schedule II" substance in Michigan and change the distribution system to require it to be dispensed through pharmacies. The problem is that under federal law doctors cannot prescribe and pharmacists cannot dispense marijuana. However, doctors do have a First Amendment right to recommend marijuana, which is how the MMMA works. If this bill passes, no doctor (and including mine) or pharmacist would risk losing their license — or worse, going to prison — by violating federal law. In other words, passage of this bill would mean patients would be denied the medicine their doctor has recommended. As if that weren't enough, **the bills would prohibit home cultivation, preventing patients and their caregivers from growing their own medicine!**

My concern is not with Heroin, Cocaine, Methamphetamines... those are illicit drugs period, my focuses are this issue regarding Marijuana Prohibition *a natural accruing herb* both at the State and Federal levels (emphases added) as it is clear where the people of Michigan stand regarding such! Vide, Medical Marihuana look how hard it was for the People of this state to make that happen, all the individual signatures it took just to get a ballet initiative in the first instance as none of you, our elected representatives would introduce a medical bill on 'there' own and now just look at your colleges Sen. Wayne Kuipers (R-30), Sen. Gerald Van Woerkom, (R-34), and Sen. Roger Kahn (R-32) go!

Also, in regards to the Michigan Medical Marihuana Act, at 333.26423 Section 3(g) Definitions; "Primary caregiver" means a person who is at least 21 years old and who has agreed to assist with a patient's medical use of marihuana and who has never been convicted of a felony involving illegal drugs. This means that a murderer or sex offender can be a legal caregiver and a convicted marihuana user cannot — this is ludicrously at its fines. Again I do not advocate the use of Heroin, Cocaine, and Methamphetamines or what not etc... But, Registered Marihuana Patients must be excluded from this prejudicial statute, not so that every illegal drug offender can become a caregiver but **so that Registered Medical Marihuana Patients that have been previously convicted as a felon prior to this enactment involving and or resulting from non violent "Medical use" 333.26423 Section 3(e) are not precluded from becoming both Registered Medical Marihuana Patients and Registered Primary Caregivers;** as the way the statute reads now, under this current enactment Registered Marihuana Patients with prior felony marijuana convictions are precluded from the exercise of their natural right to run a legitimate caregiver business as both a patient and caregiver; this is unconstitutional, in regards to the oath you took while making your election (it is you reaffirming my inalienable rights that which is constitutional "rights" "constitutional", hence constitutional "rights");

"Personal liberty, or the Right to enjoyment of life and liberty, is one of the fundamental or natural Rights, which has been protected by its inclusion as a guarantee in the various constitutions, which is not derived from, or dependent on, the U.S. Constitution, which may not be submitted to a vote and may not depend on the outcome of an election. It is one of the most sacred and valuable Rights, as sacred as the Right to private property... and is regarded as inalienable." 16 C.J.S., Constitutional Law, Sect.202, p.987.

Jusjurandi forma verbis differt, re convenit; hunc enim sensum habere debet, ut Deus invocetur, The form of taking an oath differs in language, but agrees in meaning; for it ought to have this sense, that God is invoked. Non est arctius vinculum inter homines quam jusjurandum, There is no closer (or firmer) link among men than an oath. Quod semel placuit in election, amplius displicere non potest, That which in making his election a man has once decided, he cannot afterwards disavow. Eodem modo quo quid constituitur, dissolvitur, In the same way as anything is constituted, it is dissolved (or destroyed). 6 Coke 53. Quodque dissolvitur eodem modo quo ligature, In the same manner that anything is bound, it is unbound. So....

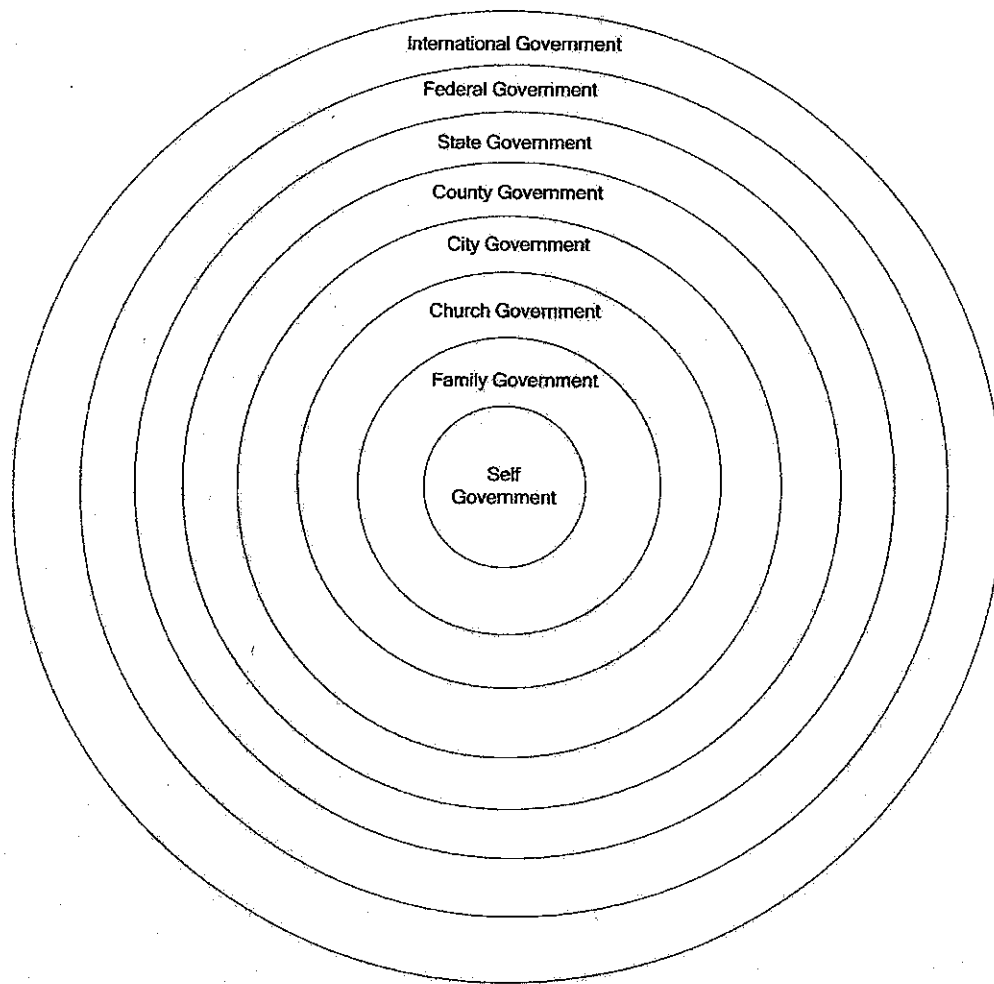
Please do not pass Senate bills 616-18 in any way shape or form!

Also you need to initiate a bill along with your colleges in regards to changing the current Michigan Medical Marihuana Act so it is not prejudicial and unconstitutional in regards to marijuana felony convictions in regard to incident(s) that which did not involve guns and or violence. I am asking personally for your support (voice) as a man, myself whom dislikes pharmaceutical narcotic pain killers such as vicodin, oxycontin, and morphine because all mess with my digestive system, nervous system, and urinary track... they all make me sick period; and all the reoccurring trips to the doctors office with their constant billing to the (tax payer) insurance industry.... Remember, this is a federally funded "State" designed economic disaster... we all live with daily, at tax payer expense!

I would now like to thank you in advance for your complete cooperation in regards to both these instant urgent matters in hand.Know that we (63% of Michigan voters) are all watching YOU, You, and you in regards to both reelections as well as the Governor's Race!

Kindest Regards

Darren Edward of the Dykstra family
c/o: 4468 Two Hundred Fifth Avenue
Morley, Michigan
united States of America



Chronic Severe Pain

What is pain? The International Association for the Study of Pain defines it as: An unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage.

Acute pain, for the most part, results from disease, inflammation, or injury to tissues. This type of pain generally comes on suddenly, for example, after trauma or surgery, and may be accompanied by anxiety or emotional distress. The cause of acute pain can usually be diagnosed and treated, and the pain is self-limiting, that is, it is confined to a given period of time and severity. In some rare instances, it can become chronic. **Chronic pain** is widely believed to represent disease itself. It can be made much worse by environmental and psychological factors. Chronic pain persists or progresses over a longer period of time than acute pain and is resistant to most medical treatments. It can-and often does-cause severe problems for patients. Pain management is an integral part of treating chronic pain.

Neuropathic Pain – is chronic pain resulting from injury to the nervous system. The injury can be to the central nervous system (brain and spinal cord) or the peripheral nervous system (nerves outside the brain and spinal cord).

Neuropathic pain is a complex, chronic pain state that usually is accompanied by tissue injury. With neuropathic pain, the nerve fibers themselves may be damaged, dysfunctional or injured. These damaged nerve fibers send incorrect signals to other pain centers. The impact of nerve fiber injury includes a change in nerve function both at the site of injury and areas around the injury. These nerves now misfire and cause pain.

Neuropathic pain often seems to have no obvious cause; but, some common causes of neuropathic pain include:

- Alcoholism
- Amputation
- Leg, hip, and back problems
- Chemotherapy
- Diabetes
- Facial nerve problems
- HIV infection or AIDS
- Multiple sclerosis
- Shingles
- Spine surgery

Symptoms may include:

- Shooting and burning pain
- Tingling and numbness

How neuropathic pain is treated:

Some neuropathic pain studies suggest the use of non-steroidal anti-inflammatory drugs, such as Aleve or Motrin, may ease pain. Some people may require a stronger painkiller, such as those containing morphine. Anticonvulsant and antidepressant drugs seem to work in some cases; (3) free sample boxes of Cymbalta PU3240, Administered by Read Lory Michelle DO. – Family Practice, Day: 10-02-09 Time 10:00 am. East Side Family Medical.

[Cymbalta (duloxetine) is approved for the treatment of diabetic peripheral neuropathy, which is a form of neuropathic pain. It acts by preventing the reuptake of serotonin and norepinephrine, which are both neurotransmitters in the central nervous system.]

In neuropathic pain, the nervous system itself is the source of pain. One of the things that the nervous system does is to filter out information being sent to it, so that only important information is sent on to the brain. One way that this happens is by having more of the neurotransmitters such as serotonin and norepinephrine present in the spinal cord and brainstem. It seems reasonable to conclude that if increasing the neurotransmitters helps for one type of neuropathic pain, then it might also help with other types of neuropathic pain, such as might occur after nerve damage in the cervical spine. While this use of Cymbalta is off-label (meaning that it has not been FDA approved for this indication), most pain physicians would be very willing to try a safe drug like Cymbalta to see if it worked.

Duloxetine (Cymbalta, Yentreve) is a serotonin-norepinephrine reuptake inhibitor manufactured and marketed by Eli Lilly. It is effective for major depressive disorder and it is as effective as venlafaxine in generalised anxiety disorder. It is a well tolerated and is considered a first line treatment strategy.[1] Duloxetine failed the US approval for stress urinary incontinence amidst the concerns about liver toxicity and suicidal events. Duloxetine alleviates pain associated with diabetic neuropathy and fibromyalgia (A syndrome characterized by chronic pain in the muscles and soft tissues surrounding joints, fatigue, and tenderness at specific sites in the body. Also called fibromyalgia syndrome, fibromyositis, fibrositis; Fibromyalgia (FM) is a disorder classified by the presence of chronic widespread pain. While the criteria for such an entity have not yet been thoroughly developed, the recognition that fibromyalgia involves more than just pain has led to the frequent use of the term "fibromyalgia syndrome"); however, its efficacy relative to the established treatments.

A large number of side effects occurring during duloxetine treatment and lack of clear advantage over existing medications prompted critical reviews concluding that duloxetine "should not be used" for stress urinary incontinence[2] and "currently has no place in the treatment of depression or diabetic neuropathy" as well.[3][4]

References

1. ^ a b Kornstein SG, Russell JM, Spann ME, Crits-Christoph P, Ball SG (February 2009). "Duloxetine in the treatment of generalized anxiety disorder". *Expert Rev Neurother* 9 (2): 155–65. doi:10.1586/14737175.9.2.155. PMID 19210191.
2. ^ a b "Duloxetine: new drug. For stress urinary incontinence: too much risk, too little benefit". *Prescrire Int* 14 (80): 218–20. December 2005. PMID 16400743.
3. ^ a b c "Duloxetine: new indication. Depression and diabetic neuropathy: too many adverse effects". *Prescrire Int* 15 (85): 168–72. October 2006. PMID 17121211.
4. ^ a b Drug and Therapeutics Bulletin concurs: "There is insufficient published evidence of its comparative efficacy to judge its duloxetine place in depression among many other longer-established antidepressant drugs, or how it compares with other therapy for diabetic peripheral neuropathic pain. Therefore we can see no place for it in either indication." "Is there a place for duloxetine?". *Drug Ther Bull* 45 (4): 29–32. April 2007. doi:10.1136/dtb.2007.45429. PMID 17451072. [http://dtb.bmj.com/cgi/pmidlookup?view=long&pmid=17451072.](http://dtb.bmj.com/cgi/pmidlookup?view=long&pmid=17451072)

Unfortunately, neuropathic pain often responds poorly to standard pain treatments and occasionally may get worse instead of better over time. For some people, it can lead to serious disability.

Treatment of neuropathic pain

The various neuropathic pains can be difficult to treat. However, with careful diagnosis and often a combination of methods of treatments, there is an excellent chance of improving the pain and return of function.

Medications are a mainstay of treatment of neuropathic pain. In general, they work by influencing how pain information is handled by the body. Much pain information is filtered out by the central nervous system, usually at the level of the spinal cord, so that you never need to deal with that information. For example, if you are sitting in a chair, your peripheral nerves would correctly send the response to the pressure between your body and the chair to your nervous system. But, because that information serves no usual purpose, it is filtered out in the spinal cord. Many medications to treat neuropathic pain operate on this filtering process. Amongst the types of medications are antidepressants, influencing the amount of serotonin or norepinephrine and antiseizure medications, influencing the amount of various neurotransmitters, such as GABA and glycine.

In cases that are difficult to treat, a pain specialist may use invasive or implantable device therapies to effectively manage the pain. Electrical stimulation of the nerves involved in neuropathic pain generation may significantly control the pain symptoms. One of the most powerful tools in treating neuropathic pain is the spinal cord stimulator, which delivers tiny amounts of electrical energy directly onto the spine; suggested during Consultation by Dr. Juneja MD. – Pain Specialist, Day:10-16-09 Time 11:50 am. East Side Family Medical.

The effect of this stimulation of the spinal cord is to allow the spinal cord to function normally even during a painful condition. It works by interrupting inappropriate pain information being sent up to the brain.

Severe or Chronic Pain

Studies have shown that marijuana is especially effective in treating neuropathic pain, commonly seen in multiple sclerosis, HIV/AIDS, and other ailments, and notoriously resistant to treatment with conventional pain drugs, including opiates. Preclinical research as well as case series and anecdotal reports suggest that marijuana use may allow reduced opioid doses when given in combination.

References

- (1) Donald Abrams, et al., "Cannabis in Painful HIV-Associated Sensory Neuropathy: a Randomized Placebo-Controlled Trial," *Neurology* 68, no. 7 (2007): 515-21.

This clinical trial involved HIV/AIDS patients suffering from HIV-associated sensory neuropathy, a painful condition estimated to eventually afflict up to one third of HIV-infected persons. There are presently no FDA-approved treatments for this indication. Donald Abrams and his colleagues tested the efficacy of smoked marijuana on both HIV neuropathy and a type of laboratory-induced pain. Smoked marijuana produced an average 34% reduction in pain and was well tolerated.

- (2) R.J. Ellis, et al., "Smoked Medicinal Cannabis For Neuropathic Pain in HIV: a Randomized, Crossover Clinical Trial," *Neuropsychopharmacology* 34, no. 3 (2009): 672-80.

This trial focused on patients with HIV-associated neuropathy refractory to at least two previous analgesic classes. Ellis and colleagues reported, "In the present experiment, cannabis reduced pain intensity and unpleasantness equally. Thus, as with opioids, cannabis does not rely on a relaxing or tranquilizing effect, (e.g. anxiolysis) but rather reduces both the core component of nociception and the emotional aspect of the pain experience to an equal degree. ... In general, side effects and changes in mood were inconsequential."

- (3) B. Wilsey, et al., "A Randomized, Placebo-Controlled, Crossover Trial of Cannabis Cigarettes in Neuropathic Pain," *Journal of Pain* 9, no. 6 (2008):506-21.

This study investigated the efficacy of smoked marijuana in patients suffering from neuropathic pain related to a variety of conditions, including multiple sclerosis, spinal cord injury, diabetes, and complex regional pain syndrome. Wilsey and colleagues concluded, "This study adds to a growing body of evidence that cannabis may be effective at ameliorating neuropathic pain, and may be an alternative for patients who do not respond to, or cannot tolerate, other drugs."

- (4) David Baker, et al., "The Therapeutic Potential of Cannabis," *The Lancet Neurology* 2, no. 5 (2003): 291-8.

This review, written prior to publication of the clinical trials described above, discussed in detail the biochemical basis for marijuana's analgesic effects. It also discussed the drawbacks of oral dosing, explaining that "oral administration is probably the least satisfactory route for cannabis owing to sequestration of cannabinoids into fat from which there is slow and variable release into plasma. In addition, significant first-pass metabolism in the liver, which degrades THC, contributes to the variability of circulating concentrations of orally administered cannabinoids, which makes dose titration more difficult and therefore increases the potential for adverse psychoactive effects. Smoking has been the route of choice for many cannabis users because it delivers a more rapid 'hit' and allows more accurate dose-titration."

- (5) M.E. Lynch, J. Young, A.J. Clark, "A Case Series of Patients Using Medicinal Marijuana for Management of Chronic Pain Under the Canadian Marijuana Medical Access Regulations," *Journal of Pain and Symptom Management* 32, no. 5 (2006): 497-501.

This case series is based on 30 patients qualified to use medical marijuana under Canadian regulations, seen at a pain management center in Nova Scotia. All suffered from chronic, severe pain that had not responded to conventional approaches. On an 11-point scale, 93% reported pain relief equal to 6 or greater, and many reported relief of other symptoms such as spasticity, poor sleep, nausea, and vomiting. 70% reported being "able to decrease use of other medications that had been causing side effects (e.g., NSAIDs, opioids, and antidepressants)."

What is the function of the low back?

The low back, or lumbar area, serves a number of important functions for the human body. These functions include structural support, movement, and protection of certain body tissues.

When we stand, the lower back is functioning to hold most of the weight of the body. When we bend, extend or rotate at the waist, the lower back is involved in the movement. Therefore, injury to the structures important for weight bearing, such as the bony spine, muscles, tendons, and ligaments, often can be detected when the body is standing erect or used in various movements.

Protecting the soft tissues of the nervous system and spinal cord as well as nearby organs of the pelvis and abdomen is a critical function the lumbar spine and its adjacent muscles.

Low Back Pain At A Glance

Functions of the low back, or lumbar area, include structural support, movement, and protection of certain body tissues.

Symptoms in the low back can relate to the bony lumbar spine, discs between the vertebrae, ligaments around the spine and discs, spinal cord and nerves, muscles of the low back, internal organs of the pelvis and abdomen, and the skin covering the lumbar area.

What is the anatomy of the low back?

The first step to understanding the various causes of low back pain is learning about the normal design (anatomy) of the tissues of this area. Important structures of the low back that can be related to symptoms there include the bony lumbar spine (vertebrae), discs between the vertebrae, ligaments around the spine and discs, spinal cord and nerves, muscles of the low back, internal organs of the pelvis and abdomen, and the skin covering the lumbar area.

The bony lumbar spine is designed so that vertebrae "stacked" together can provide a movable support structure while also protecting the spinal cord (nervous tissue that extends down the spinal column from the brain) from injury. Each vertebrae has a spinous process, a bony prominence behind the spinal cord, which shields the cord's nervous tissue. They also have a strong bony "body" in front of the spinal cord to provide a platform suitable for weight bearing of all tissues above the buttocks. The lumbar vertebrae stack immediately atop the sacrum bone in between the buttocks. On each side, the sacrum meets the iliac bone of the pelvis to form the sacroiliac joint of the buttocks.

The discs are pads that serve as "cushions" between each vertebral body. They help to minimize the impact of stress forces on the spinal column. Each disc is designed like a jelly donut with a central softer component (nucleus pulposus) and a surrounding outer ring (annulus fibrosus). The central portion of the disc is capable of rupturing (herniating) through the outer ring, causing irritation of adjacent nervous tissue and sciatica, as described below.

Ligaments are strong fibrous soft tissues that firmly attach bones to bones. Ligaments attach each of the vertebrae and surround each of the discs.

The nerves that provide sensation and stimulate the muscles of the low back as well as the lower extremities (the thighs, legs, feet, and toes) exit the spinal column through bony portals called "foramen."

Many muscle groups that are responsible for flexing, extending, and rotating the waist, as well as moving the lower extremities, attach to the lumbar spine through tendon insertions.

The aorta and blood vessels that transport blood to and from the lower extremities pass in front of the lumbar spine in the abdomen and pelvis. Surrounding these blood vessels are lymph glands and involuntary nervous system tissues, which are important in maintaining bladder and bowel control.

MALE STRESS URINARY INCONTINENCE

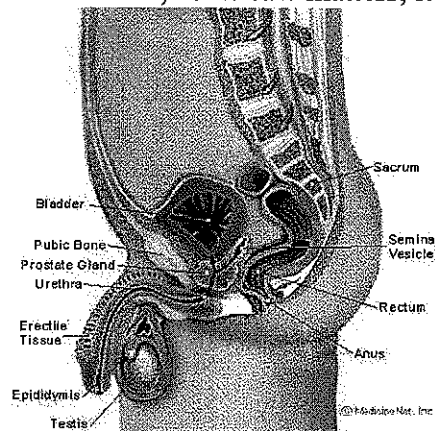
The prostate gland is a significant pelvic structure in men. The kidneys are on either side of the back of the lower abdomen, in front of the lumbar spine.

The skin over the lumbar area is supplied by nerves that come from nerve roots that exit from the lumbar spine.

Prostate gland: A gland within the male reproductive system that is located just below the bladder. Chestnut shaped, the prostate surrounds the beginning of the urethra, the canal that empties the bladder.

The prostate is actually not one but many glands, 30-50 in number, between which is abundant tissue containing many bundles of smooth muscle. The secretion of the prostate is a milky fluid that is discharged into the urethra at the time of the ejaculation of semen.

The origin of the name "prostate" is quite curious. The word is from the Greek "prostates", to stand before. The anatomist Herophilus called it the prostate because, as he saw matters, it stands before the testes.



The ability to hold urine and control urination depends on the normal function of the lower urinary tract, the kidneys, and the nervous system. You must also have the ability to recognize and respond to the urge to urinate. Stress incontinence is a bladder storage problem in which the strength of the muscles (urethral sphincter) that help control urination is reduced. The sphincter is not able to prevent urine flow when there is increased pressure from the abdomen. Men can leak from a variety of neurologic causes, male leakage could be scar tissue blocking the bladder neck or damage to the nerves of the bladder.

Urine loss occur when you change from a sitting or lying position to a standing position
Leak urine unexpectedly

Urine leakage: -Mild (a few drops), - Moderate (wet underwear), and - Severe (wet outerwear)

- Stress incontinence may occur as a result of weakened pelvic muscles that support the bladder and urethra or because of a malfunction of the urethral sphincter. The weakness may be caused by: Brain or nervous system (neurological) injury

Back pain has become the high price paid by our modern lifestyle and is a startlingly common cause of disability for many Americans, including both active and inactive people. Back pain that spreads to the leg is called sciatica and is a very common condition (see below). Another common type of back pain is associated with the discs of the spine, the soft, spongy padding between the vertebrae (bones) that form the spine. Discs protect the spine by absorbing shock, but they tend to degenerate over time and may sometimes rupture. Spondylolisthesis is a back condition that occurs when one vertebra extends over another, causing pressure on nerves and therefore pain. Also, damage to nerve roots (see Spine Basics in the Appendix) is a serious condition, called radiculopathy, that can be extremely painful. Treatment for a damaged disc includes drugs such as painkillers, muscle relaxants, and steroids; exercise or rest, depending on the patient's condition; adequate support, such as a brace or better mattress and physical therapy. In some cases, surgery may be required to remove the damaged portion of the disc and return it to its previous condition, especially when it is pressing a nerve root. Surgical procedures include discectomy, laminectomy, or spinal fusion.

What are types of nociceptive pain?

Most back, leg, and arm pain is nociceptive pain. Nociceptive pain can be divided into two parts, radicular or somatic.

Radicular pain: Radicular pain is pain that stems from irritation of the nerve roots, for example, from a disc herniation. It goes down the leg in the distribution of the nerve that exits from the nerve root at the spinal cord. Associated with radicular pain is radiculopathy, which is weakness, numbness, tingling or loss of reflexes in the distribution of the nerve.

Somatic pain: Somatic pain is pain limited to the back or thighs. The problem that doctors and patients face with back pain

What are common causes of low back pain?

Common causes of low back pain include lumbar strain, nerve irritation, lumbar radiculopathy, bony encroachment, and conditions of the bone and joints. Each of these is reviewed below.

1. Lumbar strain (acute, chronic)

A lumbar strain is a stretching injury to the ligaments, tendons, and/or muscles of the low back. The stretching incident results in microscopic tears of varying degrees in these tissues. Lumbar strain is considered one of the most common causes of low back pain. The injury can occur because of overuse, improper use, or trauma. Soft-tissue injury is commonly classified as "acute" if it has been present for days to weeks. If the strain lasts longer than three months, it is referred to as "chronic."

Lumbar strain most often occurs in people in their forties, but it can happen at any age. The condition is characterized by localized discomfort in the low back area with onset after an event that mechanically stressed the lumbar tissues. The severity of the injury ranges from mild to severe, depending on the degree of strain and resulting spasm of the muscles of the low back.

The diagnosis of lumbar strain is based on the history of injury, the location of the pain, and exclusion of nervous system injury. Usually, x-ray testing is only helpful to exclude bone abnormalities.

The treatment of lumbar strain consists of resting the back (to avoid re-injury), medications to relieve pain and muscle spasm, local heat applications, massage, and eventual (after the acute episode resolves) reconditioning exercises to strengthen the low back and abdominal muscles. Long periods of inactivity in bed are no longer promoted, as this treatment may actually slow recovery. Spinal manipulation for periods of up to one month has been found helpful in some patients that do not have signs of nerve irritation. Future injury is avoided by using back-protection techniques during activities and support devices as needed at home or work.

2. Nerve irritation

The nerves of the lumbar spine can be irritated by mechanical impingement or disease any where along their paths—from their roots at the spinal cord to the skin surface. These conditions include lumbar disc disease (radiculopathy), bony encroachment, and inflammation of the nerves caused by a viral infection (shingles). See discussions of these conditions below.

Introduction to pinched nerve

Nerves are like electrical cords that carry information from the brain to the rest of the body and vice-versa. They are distributed throughout the entire body.

Motor (efferent) nerves carry information from the brain out to the body. This allows the brain to send commands to the various organs of the body. For example, these commands are sent to the muscles causing them to contract and move, or sends information to the heart to either beat faster or slower.

Sensory (afferent) nerves send information from the body back to the brain for processing, including information about pain, touch, taste, temperature, or other sensations.

The information travels along the nerve by an electrochemical signal, much like information traveling along an electrical cord. When a nerve is pinched, the signal is interrupted somewhere along its path.

What causes a pinched nerve?

A pinched nerve is caused when a nerve is somehow damaged or injured by direct pressure or compression and is unable to properly conduct its signal. There are many potential causes for a pinched nerve, depending on the location of the nerve.

Pinched nerve in the neck or lower back

A pinched nerve in the neck or lower back can be caused by a herniated disc, arthritis, bone spurs, or spinal stenosis.

Spinal stenosis is a narrowing of the spinal canal through which the nerves pass with the spine. A pinched nerve in the lower back or buttock can compress the sciatic nerve, which can cause sciatica.

Nerve compression: "Pinching" a nerve by putting too much pressure on it. For example, the sciatic nerve may be painfully compressed by a ruptured disc in the lower spine causing sciatica.

What are symptoms of sciatica?

Sciatica causes pain, a burning sensation, numbness, or tingling radiating from the lower back and upper buttock down the back of the thigh to the back of the leg. Severe sciatica can make walking difficult if not impossible. Sometimes the symptoms of sciatica are aggravated by walking or bending at the waist and relieved by lying down.

How is sciatica diagnosed?

Sciatica is diagnosed with a physical exam and medical history. The typical symptoms and certain examination maneuvers help the health-care practitioner to diagnose sciatica. Sometimes, X-rays, films, and other tests, such as CT scan, MRI scan, and electromyogram, are used to further define the exact causes of sciatica.

Sciatica At A Glance

Sciatica is a nerve pain from irritation of the sciatic nerve.

The sciatic nerve is the largest nerve in the body.

Sciatica pain is typically felt from the low back to behind the thigh and radiating down below the knee.

Treatments for sciatica depend on the underlying cause and the severity of the pain.

3. Lumbar radiculopathy

Damage to the disc Lumbar radiculopathy is nerve irritation that is caused by damage to the discs between the vertebrae. occurs because of degeneration ("wear and tear") of the outer ring of the disc, traumatic injury, or both. As a result, the central softer portion of the disc can rupture (herniate) through the outer ring of the disc and abut the spinal cord or its nerves as they exit the bony spinal column. This rupture is what causes the commonly recognized "sciatica" pain that shoots down the leg. Sciatica can be preceded by a history of localized low-back aching or it can follow a "popping" sensation and be accompanied by numbness and tingling. The pain commonly increases with movements at the waist and can increase with coughing or sneezing. In more severe instances, sciatica can be accompanied by incontinence of the bladder and/or bowels.

Lumbar radiculopathy is suspected based on the above symptoms. Increased radiating pain when the lower extremity is lifted supports the diagnosis. Nerve testing (EMG/electromyogram and NCV/nerve conduction velocity) of the lower extremities can be used to detect nerve irritation. The actual disc herniation can be detected with radiology testing, such as CAT or MRI scanning.

Treatment of lumbar radiculopathy ranges from medical management to surgery. Medical management includes patient education, medications to relieve pain and muscles spasm, cortisone injection around the spinal cord (epidural injection), physical therapy (heat, massage, ultrasound, electrical stimulation), and rest (not strict bed rest, but avoiding re-injury). With unrelenting pain, severe impairment of function, or incontinence (which can indicate spinal cord irritation), surgery may be necessary. The operation performed depends on the overall status of the spine, and the age and health of the patient. Procedures include removal of the herniated disc with laminotomy (a small hole in the bone of the lumbar spine surrounding the spinal cord), laminectomy (removal of the bony wall), by needle technique (percutaneous discectomy), disc-dissolving procedures (chemonucleolysis), and others.

What is radiculopathy?

Radiculopathy is a condition due to a compressed nerve in the spine that can cause pain, numbness, tingling, or weakness along the course of the nerve. Radiculopathy can occur in any part of the spine, but it is most common in the lower back (lumbar radiculopathy) and in the neck (cervical radiculopathy). It is less commonly found in the middle portion of the spine (thoracic radiculopathy).

What are the risk factors for radiculopathy?

Risk factors for radiculopathy are activities that place an excessive or repetitive load on the spine. Patients involved in heavy labor or contact sports are more prone to develop radiculopathy than those with a more sedentary lifestyle. A family history of radiculopathy or other spine disorders also increase the risk of developing radiculopathy.

What are the causes of radiculopathy?

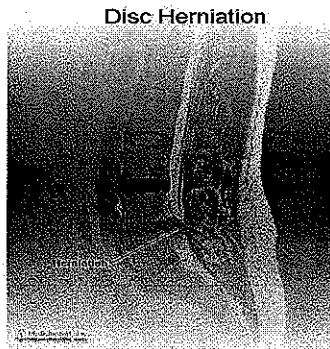
Radiculopathy is caused by compression or irritation of the nerves as they exit the spine. This can be due to mechanical compression of the nerve by a disk herniation.

What is a herniated disc? What causes it?

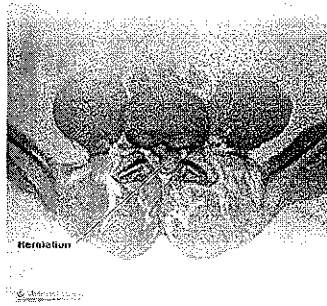
As described above, each disc of the spine is designed much like a jelly donut. As the disc degenerates from age or injury, the softer central portion can rupture (herniate) through the surrounding outer ring (annulus fibrosus). This abnormal rupture of the central portion of the disc is referred to as a disc herniation.

The most common location for a herniated disc to occur is in the disc at the level between the fourth and fifth lumbar vertebrae in the low back. This area is constantly absorbing the impact of bearing the weight of the upper body. This is especially important when we are standing or sitting. The lower back is also critically involved in our body's movements throughout the day, as we twist the torso in rotating side to side and as we hinge the back in flexion and extension while bending or lifting.

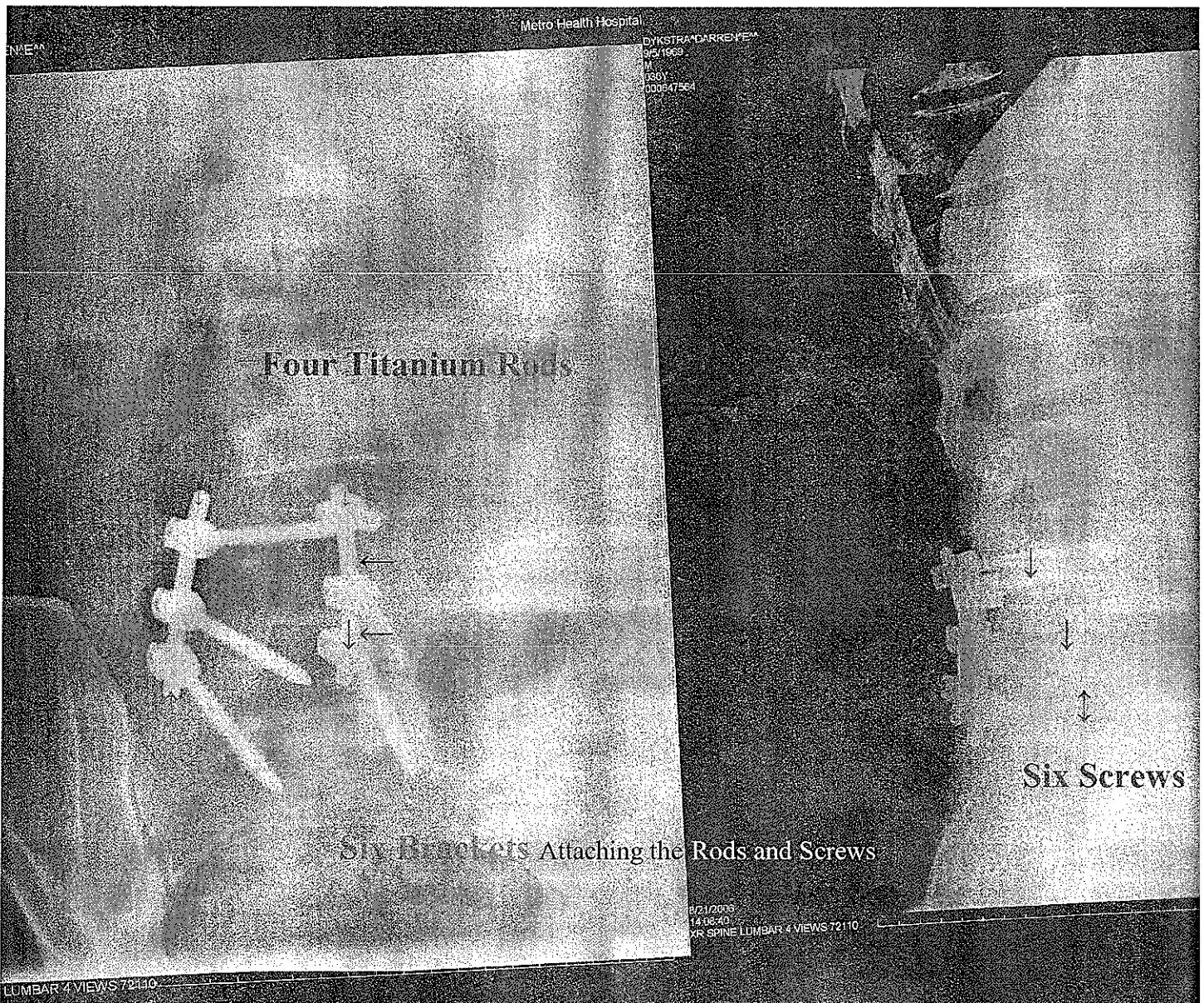
Picture of herniated disc between L4 and L5



Cross-section picture of herniated disc between L4 and L5
Disc Herniation



Ex-ray picture of disc fusion between L4 and L5



Ex-ray picture of disc fusion between L4 and L5

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